

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: GREENWOOD POND	Lake Area (ha): 20.03
Town: KINGSTON	Maximum depth (m): 3.6
County: Rockingham	Mean depth (m): 2.1
River Basin: Merrimack	Volume (m <sup>3</sup> ): 424500
Latitude: 42°56'12" N	Relative depth: 0.7
Longitude: 71°03'43" W	Shore configuration: 1.32
Elevation (ft): 123	Areal water load (m/yr): 2.95
Shore length (m): 2100	Flushing rate (yr <sup>-1</sup> ): 1.40
Watershed area (ha): 131.6	P retention coeff.: 0.75
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

24 January 1996

19 July 1995

DOM. PHYTOPLANKTON (% TOTAL)	#1	MALLOMONAS 35%	CERATIUM 60%
	#2		DINOBYRON 25%
	#3		OSCILLATORIA 5%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			6.38
DOM. ZOOPLANKTON (% TOTAL)	#1	BOSMINA 32%	POLYARTHRA 45%
	#2	KERATELLA 25%	DIAPHANOSOMA 18%
	#3	NAUPLIUS LARVA 25%	CALANOID COPEPOD 14%
ROTIFERS/LITER		42	333
MICROCRUSTACEA/LITER		61	276
ZOOPLANKTON ABUNDANCE (#/L)		106	643
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			2.4
BOTTOM DISSOLVED OXYGEN (mg/L)		5.6	3.1
BACTERIA (E. coli, #/100 ml)	#1		5
	#2		93
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>) : None  
Anoxic volume (m<sup>3</sup>) : None

**CHEMICAL:**

Lake: GREENWOOD POND

Town: KINGSTON

	24 January 1996		19 July 1995		
DEPTH (m)	1.0	3.0	1.0		2.0
pH (units)	6.1	6.3	7.0		7.2
A.N.C. (Alkalinity)	10.4	13.7	15.1		15.2
NITRATE NITROGEN	0.10	0.12	< 0.10		< 0.10
TOTAL KJELDAHL NITROGEN	0.79	0.91	0.45		0.46
TOTAL PHOSPHORUS	0.019	0.016	0.022		0.027
CONDUCTIVITY ( $\mu\text{mhos/cm}$ )	122.7	139.0	128.3		129.5
APPARENT COLOR (cpu)	65	55	50		50
MAGNESIUM			1.55		
CALCIUM			8.0		
SODIUM			14.6		
POTASSIUM			2.10		
CHLORIDE	22	26	27		27
SULFATE			7		7
TN : TP	47	64	20		17
CALCITE SATURATION INDEX			2.2		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1995**

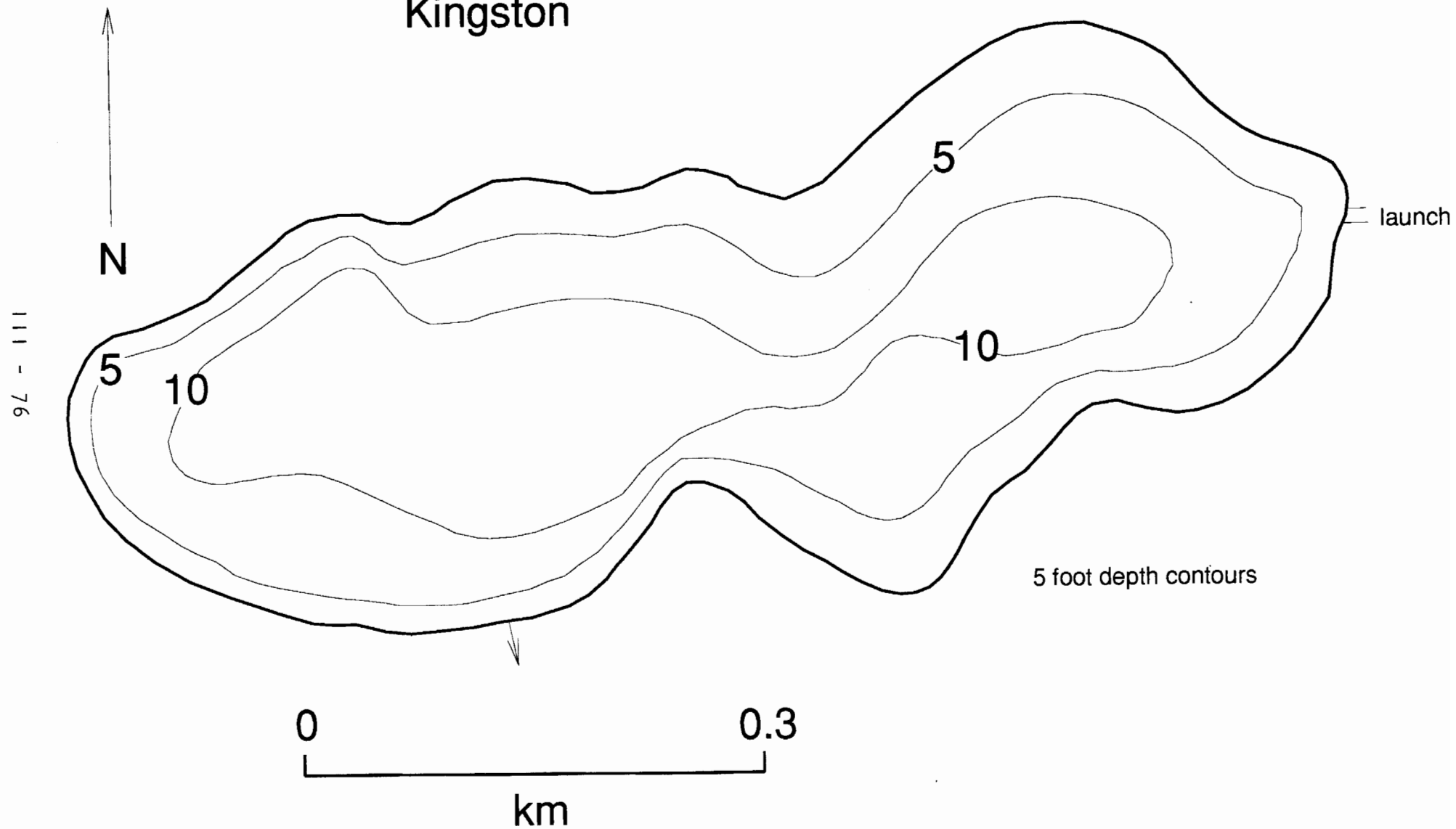
D.O. S.D. PLANT CHL TOTAL CLASS

**	3	4	1	8	Meso.
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**COMMENTS:**

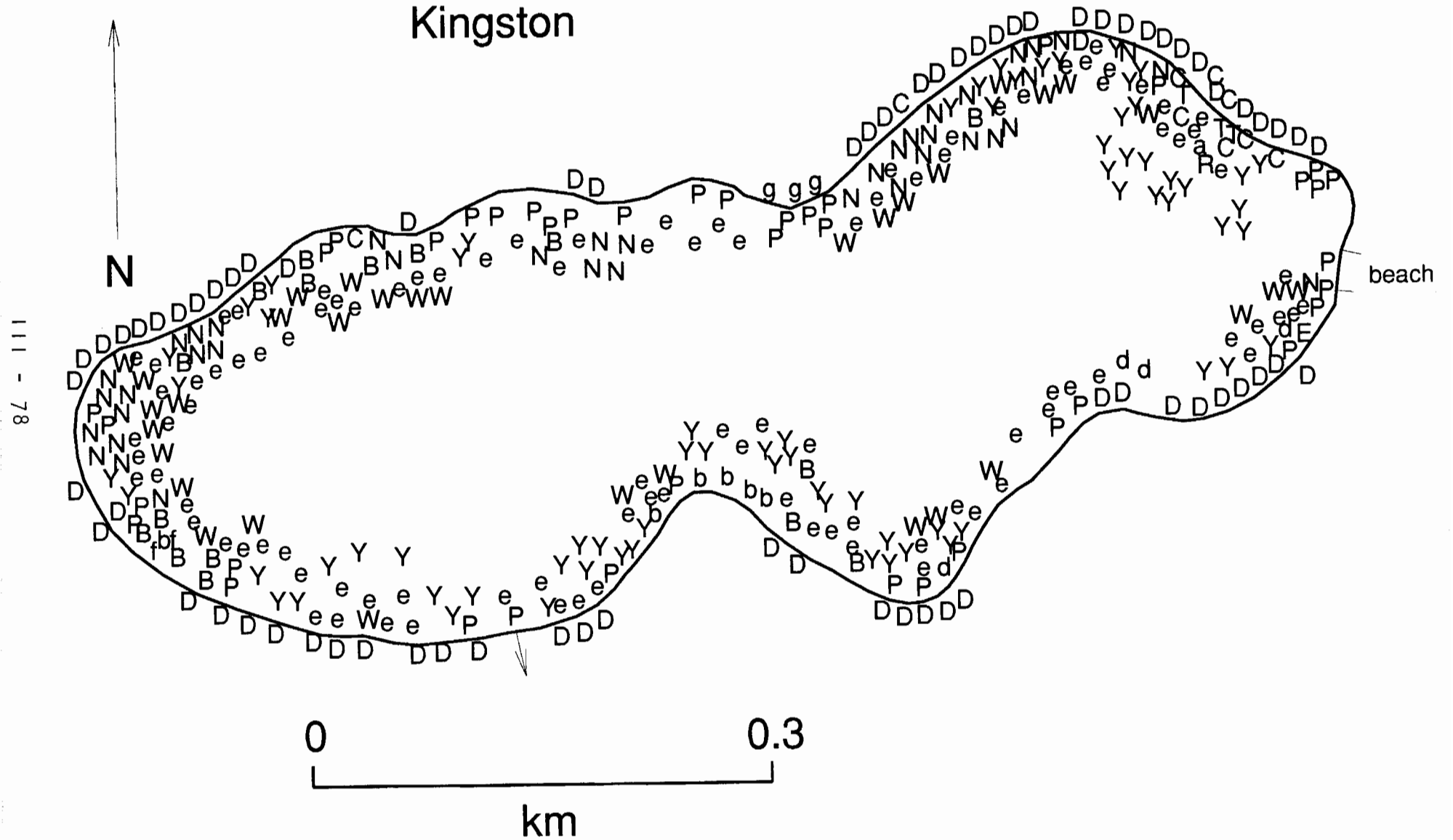
1. Also known as Greenwood "Lake".
2. This pond was previously surveyed and classified in 1982. It was rated eutrophic in 1982. The chlorophyll was less and the water clarity greater in 1995. A weak thermal stratification was also present in 1982, accompanied by depleted oxygen in the bottom waters. More frequent sampling is needed to determine if these differences are real or normal yearly variations.
3. Chloride, sodium and conductivity values suggest that road salt runoff enters the pond. The values for these parameters were higher than in 1982.

# Greenwood Pond Kingston



[illegible]

# Greenwood Pond Kingston



# AQUATIC PLANT SURVEY

LAKE: GREENWOOD POND

TOWN: KINGSTON

DATE: 07/19/95

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
e	<i>Elodea nuttallii</i>	Waterweed	Common/Abun
L	<i>Chamaedaphne calyculata</i>	Leatherleaf	Scattered
B	<i>Brasenia schreberi</i>	Water shield	Scattered
W	<i>Potamogeton nodosus</i>	Pondweed	Common
N	<i>Nymphaea</i>	White water lily	Scat/Common
R	<i>Potamogeton robbinsii</i>	Robbins pondweed	Scattered
U	<i>Utricularia</i>	Bladderwort	Scattered
P	<i>Pontederia cordata</i>	Pickernelweed	Scat/Common
Y	<i>Nuphar</i>	Yellow water lily	Common
D	<i>Decodon verticillatus</i>	Swamp loosestrife	Common/Abun
C	<i>Ceratophyllum demersum</i>	Coontail	Sparse
T	<i>Typha</i>	Cattail	Scattered
a	<i>Potamogeton amplifolius</i>	Bass weed	Scattered
g	<i>Myrica gale</i>	Sweet gale	Scattered
b	Cyperaceae	non-flowering sedge	Sparse
f	<i>Potamogeton natans</i>	Floating-leaf pondweed	Sparse
d	<i>Potamogeton diversifolius</i>	Pondweed	Sparse
E	<i>Eriocaulon septangulare</i>	Pipewort	Sparse

**OVERALL ABUNDANCE: Common/Abun**

## GENERAL OBSERVATIONS:

1. *Elodea* was present throughout the pond.
2. Filamentous green algae were common over most of the bottom and clinging to much of the *Elodea*.